### RECEIVED

### NOV 04 2019



Enforcement and Compliance Assurance Division

EH&S/Regulatory

October 23, 2019

#### VIA CERTIFIED MAIL 9414 8149 0108 4218 8143 33

Director, Air and Toxics Technical Enforcement Program U.S. Environmental Protection Agency – Region 8 1595 Wynkoop Street Denver, CO 80202-1129

Re:

NSPS Subpart OOOOa Annual Report - Wyoming

Chesapeake Operating, L.L.C.

#### Dear Sir or Madam:

Per 40 C.F.R. § 60.5420a(b), Chesapeake Operating, L.L.C. is submitting the annual report for affected facilities under 40 C.F.R. §60.5365a for the reporting period beginning on August 2, 2018.

This certification is based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

If you have any questions, please contact Jason Conway at (405) 935-6351.

Sincerely,

Chesapeake Operating, L.L.C

(b) (6)

Tim Beard

Vice President - Rockies Business Unit

#### Enclosure

CC:

Wyoming Department of Environmental Quality Air Quality Division, Herschler Building 122 West 25th Street Chevenne, WY 82002

VIA CERTIFIED MAIL 9414 8149 0801 4218 8143 40

NSPS SUBPART QOOO» REPORT- WELL AFFECTED FACILITIES

hesapeake Operating	1278		TOTAL STANK	Bancy.	Line Broken	2316 AFE		State of the state of	Time Wall Shut in	1	-	Marie San	15002	7			
Well Name	State	County	Facility Name	United States Well Number	Latitude Longitude (* NAD83) (* NAD83)	Onset of Flowback Following Hydrasilic Fracturing or Refracturing (Date/Time)	Flow Directed to Separator (Date/Time)	Returned to Initial Flowback Stage (Date/Time)	and Flowback Equipment Permanently Disconnected or the Startup of Production (Date/Time)	Duration of Flowta (Hours)	Duration of Recovi	Disposition of Recovery	Duration of Combustion (Hours)	Duration of Vente (Hours)	Starting Date and finding Date for the Period the Well Operated Under the Exception (date)	Specific Reasons for Venting in Lieu of Cepture or Combustion andlor for the Claim of Technical Infeasibility	Record of Deviation
WASA 29-35-68 A TR	WYOMING	CONVERSE	AMASA 29-35-68 A PAD	4900943330	(b) (9)	5/17/2019 18:00	05/17/19 8:00 PM 05/20/19 8:00 PM	5/26/2019 19:00	5/23/2019 15:00	141		5 Sales	134		3	Construction on the third party gathering line was not completed. Reinjection of gas as a form of enhanced oil necessity or sequestration was not feasible in this fall. White a portion of the gas may be used as faul on this site, the variety exceeded the expansion tall salling, or no faul range was required. The when classifies or discretely exceeded the expansion talk salling, or no faul range was required. The when classifies on such gas for other beneficial proposes. Extertact is necessity policies in 100 A.	No Deviation
8 1-35-71 USA A TR	WYCMBNS	CONVERSE	88 1-35-71 USA A PAD	4900934279		8/29/2018 16:00	8/29/2018 16:00		8/29/2018 16:00	0		0 Sales	,				No Deviction
88 19-35-70 USA A TR 774	WYOMING	CONVERSE	88 19-35-70 USA A PAD	4900031922		4/30/2019 21:00	5/10/2019 20:00		5/10/2019 20:00	230		O Sales	,		5		No Deviation
8 19-35-70 USA A TR	WYOMING	CONVERSE	8B 19-35-70 USA A PAD	4900931921		4/29/2019 19:00	5/8/2019 0:00		5/7/2019 23:00	100		O Sales					No Deviation
B 19-35-70 USA B TR	WYOMBIG	CONVERSE	88 19-35-70 USA 8 PAD	4900634725		5/4/2019 13:00	54/2019 15:00		5/4/2019 15:00	2		0 Sales					No Deviation
B 19-35-70 USA B TR	WYCMING	CONVERSE	BB 19-35-70 USA B PAD	4900934725			55/2019 18:00		5/5/2019 18:00								No Deviation
98 19-35-71 USA A TR 8H	WYOMING		86 19-35-71 USA A PAD	4900639172		5/5/2019 18:00 2/10/2019 21:00	03/1 1/19 5:00 AM 02/11/19 10:00 AM		2/11/2019 11 00	14		0 Sales			9	Produced gas did not need pipeline specification. Rehipiction of gas as a form of enhanced oil recovery or sequestration was not leadille in this field. White a period of the gas may be used as field on this sts, the quantity recorded the experiment field stript, or no field stage was required. The stort duration of field golden or not not consider required to see the gas for other banked of uses the gas for other banked oil uses the gas for other banked oil uses the gas for other banked oil uses the	No Deviation
98 19-35-71 USA A TR 19H	WYOMING	CONVERSE	88 19-35-71 LISA A PAD	4900934728		2/8/2019 20:00	2/5/2019 21:00		2/8/2019 22:00	2		1 Sales	,		0		No Deviation
96 19-35-71 USA A TR 12N	WYOMING		86 19-35-71 USA A PAD	4600634727		2/7/2019 13:00	2/7/2019 14:0		2/7/2019 17:00			1 Sales				Produced gas did not neet pipeline specification. Rehipication of gas as a form of enhanced oil recovery or expectation was not travible in this field. White a perion of the gas may be used as fuel on this sits, the questify receded the experient first string, or no fuel scape was required. The distring during flowback did not make it fleasible to use the gas for other beneficial purposes.	No Deviation
88 2-35-71 A TR 15H 86 2-35-71 USA A TR	WYOMING	CONVERSE	GRAHAM 2-35-71 A PAD	4900834208		4/5/2019 12:00	48/2019 14/0		48/2019 14:00	2		0 Sales	1		0		No Deviation
88 2-35-71 USA N TR. ISH	WYOMENS	CONVERSE	GRAHAM 2-35-71 A PAD	4900934205		4/7/2019 17:00	47/2019 19:00		4/7/2019 19:00	2		0 Sales	,		0		No Deviation
98 2-35-71 USA A TR	WYOMING	CONVERSE	GRAHAM 2-35-71 A PAD	4500534199		4/9/2019 13:00	49/2019 16:00		49/2019 19:00			1 Sales				Produced gas del not meet pipeline specification. Richipetion of gas as a jum of entranced of recovery or organization was not habitile in this field, second to the supplement has informed, or no feel suggest was recovered. The streeted by the supplement has informed for one feel suggest was recovered. The short disastion of flaving daving flowback did not make it fleasible to use the gas for other beneficial purposes.	No Deviation
88 2-35-71 USA A TR	WYOMING	CONVERSE	GRAHAM 2-35-71 A PAD	4900934201		4/9/2019 16:00	49/2019 21 0		4/9/2019 21:00			1 Sales					No Deviation
88 2-35-71 USA A TR	WYCMING	CONVERSE	GRAHAM 2-35-71 A PAD	4900932015		4/10/2019 10:00	4/10/2019 13:00		4/10/2019 13:00	-		1 Sales					No Deviation
00 25-36-71 UGA A TR		-															No Deviation
DH .	WYCMING	CONVERSE	88 25-35-71 USA A PAD	4900634621		10/29/2018 14:00	10/29/2018 15:0		10/29/2018 15:00			D Sales	-		0		ne beyearin
88 25-35-71 USA A TR 11H 35 25-35-71 USA A TR	WYOMING	-	88 25-35-71 USA A PAD	4900634620		10/29/2018 20:00	10/25/18 9:00 PM 10/23/18 2:00 AM 10/23/18 8:00 AM 10/27/18 2:00 PM		10/27/2018 14:00	18		0 Sales	11		9	Combruction on the third party gethering line was not completed, Relejection of gas as a form of enhanced of recovery or sequestation was not feasible in this field. While a portion of the gas may be used as full on this sits, the quantity exceeded the explainment had rating, or no full usage was required. The shirt duration of filting during the behaved drift or least a feasible to use the gas for other beneficial purposes. Distance to nearest pipeline is 225 ft.	No Deviation
211	WYOMING	CONVERSE	88 25-35-71 USA A PAD	4900834618		10/30/2016 7:00	10/30/2018 8 0		10/30/2018 8:00			OSales	-		0		rac cevanor
36 25-35-71 USA A TR 13H	WYOMING	CONVERSE	88 25-35-71 USA A PAD	4900934619		10/26/2018 8:00	1026/2016 8 0	9	10/26/2018 10:00	2		0 Sales	1		o	Produced gas did not meet pipeline specification. Rainpection of gas as a firm of enhanced oil necessory or expososition was not fissable in this field. White a portion of the gas may be used as but on this site, the quarrier, accessed the sequipment fluid influid, or no fuel usings was required. The infant duration of fluing disting flowback did not make it fissable to use the gas for other beneficial jurposos.	No Deviation
98 29-35-71 USA B TR ISH	WYOMING	CONVERSE	88 29-35-71 USA 8 PAD	4900034729		1/19/2019 13:00	01/19/19 8:00 PM 01/29/19 2:00 AA	1,29/2019 0.00	1/20/2019 2:00	13		1 Sales			0	Produced gas did not meat pipeline specification. Rishipaction of gas as a form of orimancial of inconvey or origination was not flexible in this field, the control of the control or origination of the control or or origination of the control of the produced of the equipment fluid riship, or no field image was required. The short character of flating obering throubook did not make it flexible to use the gas for other beneficial purposes.	No Deviation
8 29-35-71 USA 8 TR	WYOMING	CONVERSE	88 29-35-71 USA 8 PAD	4900934730		1/18/2019 21:00	1/18/2019 21 0		1/19/2019 2:00			1 Sales			0	Produced gas did not meet pipeline opecification. Metispection of gas as a form of enhanced oil recovery or sequestration was not feasible in this field. White a profess of the gas may be used as feel on the sits. the quantity secreted the equipment that oiling, or no feel stages was required. The short dissalan of fairing during flowback did not make it feasible to use the gas for other handroid purposes.	No Deviation
LAUSEN 11-34-71 USA TR 20H		CONVERGE	GLAUSEN 11-34-71 USA A PAD CLAUSEN 11-34-71 USA A	4900034963		12/18/2018 12:00	12/18/2018 16:0		12/29/2018 23:00	5		1 Gales	54		0	Comstruction on the third party gathering line was not completed, Respection of gas as a form of enhanced of accovery or sequestration was not feesable in this falls. White is person of the gas may be used as fuel on this site, the quartity exceeded the expurperent facility, or no fact usage was required. The short distration of facing during thorback did not make it housible to use the gas for other horizontal products.	No Deviation
TR 21H	WYOMING	CONVERSE	PAD	4900934564		12/19/2018 10:00	12/19/2018 11:0		12/19/2018 11:00			D Sales			0		No Deviation
CAUSEN 25-34-70 USA TR 20H	WYOMING	CONVERSE	PAD CLAUSEN 28-34-70 USA A	4000034865		6/17/2019 8:00	6/17/2019 8:0	3	6/17/2019 9:00	1		1 Sales			0		No Deviation
LAUSEN 28-34-70 USA	-	-	CLAUSEN 28-34-70 USA A	4900934896			6/16/2019 14:0		6/16/2019 14:00								No Deviation

Well Name	Bare	County	Facility Name	United States Well Number	Carmide (* NADEO)	Longitude (*NADES)	Creat of Flowback Following Hydrasiic Fracturing or Refracturing (Osto/Time)	Flow Directed to Separator (Date/Terre)	Returned to trittal Plowtoick Toge (Date/Time)	Fine Well Shut to and Flowback Stpolyment Permanently Depositionable or the Startup of Production (Date/Time)	Duration of Flowbaci (Nowrol)	Duarties of Peccury (Hours)	Disposition of flucturing	Develors of Comboston (Hours)	Duration of Venting (Higura)	Braning Date and Engling Date for the Period the Vivil Operated Under the Exception (date)	Specific Researce for Venting to Lieu of Cophies or Communion and/or for the Claim of Technical Entrashility	Record of Designations
DLAUSEN 28-34 TO USA 6 TR 204	WYCMPIG	CONVERSE	CLAUGEN 28-34-70 LEA S	48000-4071	(b) (9	9)	801-0019-4-00	06/21/19 6 (8) AM. 06/22/19 9 00 AM	06/21/19/6:00 AM. 06/22/19/6:00 AM.	6/23/2010 11:00	25		Galas	4			Produced gas did not need payofire specification. Resignation of gas as a form of unbanned of somewhy or suspendiation rais not baseled at this field. White a portion of the gas may be used as held and this site, the questify accessed the explanent field siting, or to fail stage, seen required. The short distant in a filtering shring flootpack did not not also days used. See a seen and payofing the payofin of red make it floatifies to sup the gas for what the make the payofin or the payofin of t	No Genishun
DLAUSEN 28-34-70 USA 8 TR 2114	wycheys	CONNERSE	GLAUSEN 28-34-70 USA (I	490090-4988			801 0019 4 00	08/21/19 6 ID AM 06/21/19 1 ID PM	6/21/0619 8:00	821/2019 14:00			3 Cales	2			Produced gas this red near pipeline operfluxion. Respection of gas as a form of influenced of inconvey or requestablish was not hastile in this fall. Within a particular of the gas may be used as foul as this six, the question according to explorate fael rainy, or or fael stage was required. The ident designs of them; primary fluxibusts do not make it fluorities to use the gas the often beneficial purposes.	No Condition
CAUSEN SSA-75 USA A TR 20H	WYCMBIS	CONVERSE	CLAUSEN RRECHURT SA TO SE-1H PAD	4900000000			7112/2019 14:00	7712/2019 16:00		7712/2019 16:00	1		Sales	0	-	1		No Deviation
CLAUSIEN SRISK TO USA A TRI 28H	WYCMPIG	COWERSE	TO 29-11/PAG	49000000075			2116/2016 20:00	PH10099 21 00		7111/2019 21:00			Salet	. 0	- 6			No Deviction
DIALITEN THESE TO LINA A THE STORY	WYCMED.	CONVENSE	CLAUSEN RANCH (347 34- TO 23-THPND	490MDEDAD			714/2019 10:00	24(2019 12:00		2400991300	3		Sales					No Counties
DLAUSEN 20-34-10 USA 1 TH 20H	WYCMENG	CONVERSE	CLAUSEN RANCHUNET 34- TO 35-11 FAC	4900900040			<b>元5/201前 22:40</b>	742019 400		34000 13:00			) Cales	,			Produced gas de rei neur goeine operfeation. Respection of gas as a farm of enhanced oil recovery or sequestration vas not habition in this facility or protect of the ground by expected on held on the abit. The quantity exceeded the subject of the growth	No Constallant
CALIFORN SO-SA-TO A TR	WYCMPIS	COHNERSE	CLAUSEN RANCH 9034-70 USA A PAD	4900930636			7122/2019 72:90	7/23/2019 0:00		7/23/2016 0:00	- 1		Dales		-			No Deviation
LAUSEN 30-34-70 USA A TRI 20H	WYCMHIS	converse	CLAUSEN RANCH 30:34:70 USA & PAC)	49000030827			7050010 1 00	7/25/2019 6:00		7050019 6.00			Tiples	0				No Chrolation
TLAUSEN 30-34-70 USA 6 TR 214	WYOMING	CONVERSE	CLAUSEN RANCH 30-34-70 USA A PAD	4900030638			7/24/2019 12:00	7/24/2018 20:00		†1942009 20100			Sales					No Devision
TRIZH	WYCMING	CONVERSE	CLAUSEN NANCH 30-54-70 LISA A PAD	4600030635			7/23/2019 18:00	Fr23/2018 20100		7/23/2010 20:90	-		Sales					No Devision
COMBB 11-20-71 UEA A TRI 21-H	WYCMING	CONVERSE	COMBI RAHCH 11-33-71 USA A PAD	4900940554			218/2019 1 00	2/18/2019 3:00		2/18/2019 7:00			Sales	4			Proficed go del not must plustive specification. Perspection of gas as a form of arhanced oil resisency or sequestration was not haustle in the face of the gas may be used as halo in this office. The gas may be used as halo in this office, the quantity accessible the equipment fund rating, or no fael usage was recorded. The phot distration of things given programment and acceptance of the programment of the gas of the programment of the gas to either betterface purposes.	No Deviation
00486 19-35-71 (45.4.A. TR 33H	WYCMING	CONVERSE	COMBS RANCH 11-33-71 USA A FAD	4800940533			2/18/2019 2 00	3/18/30/10 3:00		2/18/2016 6:00			Sales	2			Produced gas did not need playfine specification. Perspection of gas as a form of enhanced of recovery or sequestablish was not fleasible in the field. White a control of the gas may be used as feet on the Link. The quantity accorded the varieties that other, or no field wage was recovered. The artist contain of fleating charge that death of the make of fleasible to use the gas for other branchists purposes.	No Devotebon
ESSAN S-SALOS USA S TH 23H	WYCMBNS.	CONVERSE	LEBAR S-3409 USA B PAD	400000000000000000000000000000000000000			7/13/2019 12:00	Trial to a go PM		7/13/2010 18/00			Sales	0		3		No Deviation
JNDEN 21-3440 USA B TR 21H	WYCMENS	CONVERSE	LINDEN 21-3449 UDA B	- CONTRACTOR			B772018 17 50	siziqena raloo		AMICOVIR Y GO			Sales	7			Produced gas did not read placifie operationine, fleriperson of gas as a fairs of extracted oil recovery or sequestration was not fleeble in the field. Not purpose to purpose the gas purpose	No Deviation
.PIOEN 21-34-66 USA 8 TR. IDH	WYTOMENG	CONVERSE	UNIDEN 21-34-60 USA 61	**************************************			882278 1830	8900 B 100		MH2018 2 00			2 Seles	-			Profused gas det not need playline upositication. Respection of gas as a form of orienteed of incomey or sequentation was not flustelle in this field. Adult a position of the gas may be used as had no this size, the question accorded the sequenteed flust gas may be used as had no this size, the question accorded the sequence flust state, or no food may be size required. The whole the sales of the region of the flust gas to state transmission purposes.	No Desiden
NAMEU 26-34-72 C TR	WYOMENG	CONVERSE	MMPU 35-34-72 C PAD	48000071495			8/25/2019 6:00	-8/25/QB18 18-00		8/25/00/18 15:00			) Gates				Produced gas defined reset plackins specification. Respection of gas as a form of enhanced of occurring or sequentiation was not flexible in the field. Makes a proteon of the gas may be sused as fived on this site, the question accorded the sequential field calling, or no half assign each respected. The site of the sequential field calling the field of each make in flexible to use the gas for other hands of flexible to use the gas for other hands of purposes.	No Deviation
NAARSI 21-34-08 A TRI 2011	WYOMENO	CONVERSE	RANKIN 31-34-60 A PAD	4800835477			11/6/2018 20:00	11/9/00/18 28:00		91/2016.600	-11		fales	12			Problems gas delined reset placifies especification. Respection of gas as a form of infranced oil recovery or sequestration was not beautile. In the field, Adde a position of the gas may be used as field on the size, the equantity accessed the equantity for latery, or my half seage was resurred. The sixth designation of flaming deliner (foreface), did not insize if flexible to use the gas for other beautiful purposes.	Ny Devotor
SAARIN 31-34-66 A TR 22H	WYOMNG	CONVERSE	RANKIN 31-34-66 A PAD	49433935461			11/6/2018 12/00	11902018 1200		1990018 16.00			Sales	3			Predicard gos del not meet piseline aperitication. Respection of gas as a fame of ortaneous oil recovery or sequestration was not baselile in the field. Another a protect of this gas may be used as faul on this sin. The quantity extension of the approved half ortage, or on faul single was recurred. The art of direction of floring during flustratic did not make it houself to use the gas for other baseliness.	No Devotion
IIAC 18-34-70 USA C TR	WYOMING	сомение	CLAUSEN 16-34-70 USA C. PAO	4900910556			2:26/2010 2:00	03:26/19-6-00 AM 03:26/19-6-00 PM	2062019 11/08	2/28/2018 7 00			9 Gales	,			Profit and gas defined twent positive specification. Recognition of gas as a form of enhanced oil recovery or sequestration was not fearline in the field white a person of the gas may be used as feel on the late. The secretific recorded the explament had allow, on the late appear an ensured. The straightful profit of the late of	No Geviation
MAC 424-AD CRY D. LM	WYCMENS	CONVERSE	HRC 434-70 USA D PAD	4903957.694			20120192100	2/25/2019 1 00		3/38/3019 1 80								No Countries

NSPS SUBPRIET DODGE REPORT: WILL AFFECTED FACILITIES

Overageake Operating	State	County	Yacility Name	United States Well Number	Latitude (*NADED)	(* PNORd) Fouldprope	Onset of Flowback Following Hydrastic Fractioning or Refractioning (Cutoffine)	Flow Directed to Separate (Cale/Texa)	Returned to Initial Planetock Stage (Cute/Time)	Time Well Shot in and Floreback Equipment Permanently Discontracted or the Startop of Production (Date/Time)	Custon of Florings (Horse)	Dustine of Recomy pleased	Disposition of financial	Deration of Construction Present	Duration of Venting	Starting Date and Sealing Oute for the Ported the Well Operated Under the Exception (date)	Specific Reasons for Venting in Limo of Copruse or Communion andio	Record of Devadors
RRC 5-34-75 USA 8 TR 21H RRC 5-34-75 USA 9 TR	WYCMENS	COMERSE	CLAUSEN 5-34-70 USA B PAQ CLAUSEN 5-34-70 USA B	460004110	(b) (	9)	#125/20040 12:90	9425/19-000 PM 0427/19-2000 AM	04/25/19 7 (E) Phy. 04/25/19 7 (E) Phy.	4272019 <b>5</b> :00			1 Sales	2			Produced gas did not need psychie specification. Religiation of gas as a filter of arthursed oil recovery or sequent-tries nees not beautiful in Para Natid. White is profess of the gas may be used as filed on the plan. The quantity exceeds the supplement find stage on the fall stage was required. The stage of one filed stage was required. The stage of the fall stage was required. The parameter of the stage of the fall stage was required. The parameter of the pa	No Deviation
SPU (2:34.7) UEX C TR	WYCMENS	COMERSE	PAD	4900034517			4/16/2019 23:00	4172019.200		417(0019 2:00			Otales		1			No Deviation
21H SFU 12-34-72 USA C TR	WYOMPIG	COMMERSE	SFU 12-34-72 USA C PAD	4900025019			7/3/2019 7:00	7/3/19 4:00 FM		73/2019 16:00			O Nales			3		No Deviation
ZDM	WYCMING	CONVERSE	SFU 12-34-72 USA C PAD	4900025101			6/30/2019 14:90	7/5/19/9/00 46/		7/8/2019 6:00	120		Chales	0				No Deviation
SFU 19-34-72 A TR 23H	WYOMENG	CONVERSE	BLEIDIQUES I TERRETZ A	4900006736			8/9/2016 20 00	88/03/18 0/00 PM 88/07/18 12 60 AM		8/42018 1:00	,		0 bales	12			Delineation well. Construction on the third party gathering the was not conspliated. Retrievalies of gas as a form of inflament of recovering many-authorities are not lessable in the first. Often a remain of the gas many the steel as fact or this size, the quantity acceptable the sequence it had raing on the time size, but the quantity acceptable the sequence it had raing on the time of the construction on construct a frazzotte or use the gas for other continuous purposes.	No Devletten
SFU 7-34-79 USA A TR 30H	WYOMENS	CONVERSE	SFU T-34-71 UBA A PAD	4900005010			11/02/2016 15:60	11/22/2016 15:00		11/22/2018 16:80			O fales	2			Produced gas delined meet plasfine specification. Retripication of gas as a form of ordinanced oil receivery or sequentration was self-transfer to the shallow in this state of the gas may be used as fault on this sink, the squarrily exceeded the equipment feel reting, or no feel usage was required. The above transfer of fairing shallow the first make it frequents to use the gas for other transfer of products.	60 Deviation
SPILI 1-04-71 USA A TR 21H	WYOMING	CONVERSE	SPU 7-34-71 USA A PND	400975020			11/23/2018 1:00	61/23/2018 3:00		11/23/2018 8:00			2 liales				Produced gas det not meet positive specification. Plansporten of gas as a form of enhanced oil recovary or sequentation reasons founds on this fall. Makes a perfort of the gas may be used as fact on this sist. The quantity accorded the sequenced fact rating, or on fact usage sea required. The plans founds on of forms during floridated and not native if floatible to use the gas for other teached purposes.	No Convention
WCR 2-ISHB USA A TR	WYOMING	CONVERSE	WCR 2-83MB A FAD	49009/32/330			2162019 1.00	3/16/2019 2:00		2162019 4 00			O Dales	,			Produced gas did not meet plasfine specification. Perinpetion of gas as a form of entered of recovery or isoperatively near set funds in the fall. White a peritor of the gas may be used as fived in this site. The quantity accorded the equipment fluid rating, or as had issign even required. The site of the control of fluing during fluidback did not name it has bits to use the gas to other benefined purpose.	No Couletters
INDR 3-2548FUSH A TR	WYCMING	CONVERSE	WCR 2-83-86 A FAD	6000121010			217/2019 1 00	2972019400		2/17/2018 11:00			O Galles			3	Produced gas did not need plasfine specification. Planspation of gas as a form of phanced oil recovery or segmentation was net fleatible in this hold. White a parties of the gas may be used as hold on this size. The quantity accorded the segment that rating, or no had stage was resulted. The other decision of floring during floridates did not exist a fleatible to use the gas for other benchmid purposes.	No Devlation
WYOMBAIG 36-35-72 GT A TR 30H	WYOMENS	CONVERSE	WYCHING 36-36-72 ST A PAID	4800008107			12/02/2018 18:00	10/03/2018 4:00		13/23/2018 14:90	2		D hales	11			Produced gas tild not need playble specification. Perspection of gas as a form of ordercost of recovery or requestration uses not beautile. In the fall, Make a profess of ting gas may be costed on half on this sile. The quantity more ended the equiptions of half ording, or no half magin years required. The about cost of fairing duting file-shock did not exact all founds to use the gas but of the harmonical purposes.	16/ Devlation
WYOMEND 36-35-72 ST A TR 25H	WYOMBIG	CONVERSE	WYCOMBIO 36-35-72 ST A PAD	4900905125			12/03/2016 30:00	12/24/2018 4:00		12/04/2018 10:00	14		† Sales				Physiciscal gast did not must pipeline specification. Rempetition of gas on a form and orderived oil recovery or requestration uses and housible in title field. While a portion of the gas may be used as build not be. the quarterly accepted the regularrant hart rating, or no had assign sea required. The shared shared sharing design flowleds of first ratios of flowing sharing flowleds of oil received flowing the gas for other benefitied purposes.	No Deviation
WYOMBIG 36-35-72 USA A TR 21H	WYOMING	CONVERSE	WYCKNENG 86-95-72 ST A PAD	4900908126			12/21/2018 19:00	12/23/2018 5:00		12/23/2018 15:00			5 Sales	10			Produced gas stall not must ploudine, specification. Harman stan of gas as a farm and anharmed oil teconiny or sequestration was not facilities from the faeld. While a portion of the gas may in used a half on this office. The squareful misconded this rejudently facilities, or no hard stange was sequined. The shirt distant on if their global products of oil make it floatible to use the gas to other benefited purposes.	No Deviation
WYCHEND 36-35-73 LIEA A TR 23H	WYOMING	CONVERSE.	WYCHANG 36-35-72 51 A	4600005138			2/2/2016 22 000	2/3/2019-4-00		3/5/2010 7:00			0 Sales				Produced gas did not neet placefine specification. Planspotion of gas so a farm of a orienteed oil recovery or sequenterities was not headle in this field. White a portion of the may be used as bed in this sat. No exacetify executed the sequente fact into you no had may a war required. The other did action of faring shelling florefact did not make if faculties to use the gas for other charical purposes.	No Deviation
YORK 12-33-70 UEA A TR 38H	WYOMING	CONVERSE	YORK RANGH 12-33-75 A	4600907446			10/31/2018 7:00	10/31/2018 8.00		10/31/2016 10:00			O Sales	٥			Produced gas did not next playdine specification. Plansportion of gas so a face of information of concepts of the gas so a face of information of the gas may be used as facilities was not facebox in this facility. White is gotten of the gas may be used as face of the size. In exactify exceeded the explanment face integr, or must issign was required. The chird clusters of facility during forebox defined entire case in facebox to use the gas for other facebox of purposes.	No Deviation
YORK 12-25-70 USA A TH JOH	WYCABNG	CONVERSE	YORK RANCH (2-33-70 A PRO	4900942134			3/14/2019 20:00	2/14/2019 21:00		21500191.00			1 Sales				Produced gas did not need pipeline specification, fluripartitio of gas as a face of orienteed of incomy or segmentation and not health in this field. While a partition of file gas may be used as field in this state this asserting exceeded the segment functioning, or on half essage was required. The asserting fluriback of our rates of health is use the significant statement of facing during fluoriback did not make it health to use the gas for right personal purposes.	No Deviation

NSPS Subpart 0000a Annual Report for period beginning 8/2/2018 - collection of fugitive emissions components at a well site

CHESAPEAKE OPERATING LLC

Operator Name

fonitoring I		FLIR GF320															
erial Numbe		44402191															
urveys Perf		Josh Fenton	Certified for Op	salesi Car Imaa	dea transcer	2010											
perator tra	ining and Experience	Trained and	Certified for Op	tical Gas Imag	ing Januar	y 2018									1		
Site Number	Site Name	Surface Latitude Value	Surface Longitude Value	ODOOs Survey Date	0000a Survey Start Time	0000s Survey End Time	Ambient Temperature (F)	Sky Conditions	Max Observed Wind Speed (mph)	Number of Leaking Components	Type of Leaking Component	Repair Date	Repair Verification Method	Number and type of leaking components not repaired	Number and type of difficult to monitor or unsafe to monitor	Number and type of components placed on delay of repair	Deviation from monitoring plan
0.5420a(b) (1)(ii)	60.5420a(b)(1)(i)	60.5420a(b )(1)(i)	60.5420a(b)(1)	60.5420a(b)( 7) (i)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(iv)	60.5420a(b)(7 )(iv)	60.5420a(b )(7)(iv)	60.5420a(b )(7)(vii)	60.5420n(b)(7)(vii	60.5420a(b)( 7)(x)	60.5420a (b)(7)(xiii)	60.5420a(b)( 7)(viii)	60.5420a(b)( 7)(ix)	60.5420a(b)( 7)(xi)	60.5420a(b)(7)(vi)
922358	UNDEN 21-34-69 USA B PAD	(b) (9)		9/26/2018	8:25	9:30	47	Sunny	13	2	Regulator; Valve	9/28/2018	oGI	0	0	0	N
928995	RANKIN 31-34-68 A PAD			12/20/2018	11:40	12:15	46	Sunny	9	3	Valve (2); Regulator	12/21/2018	OGI	0	0	0	N
929929	COMBS 13-33-71 A PAD			9/26/2018	7:20	8:10	42	Sunny	i	0	N/A	N/A	N/A	0	Ø	0	N.
919409	CLAUSEN RANCH 8-34-70 B PAD			9/25/2018	10:15	11:00	52	Sunny	15	3	Valve (2); Thief Hatch	9/25/2018	OGI	0	0	0	N
915283	CLAUSEN RNCH U 7-34-70 USA A P			8/29/2018	12:15	13:00	77	Sunny	9	0	N/A	N/A	N/A	0	0	0	N
902674	COMBS RANCH 7-33-70 USA C PAD			10/30/2018	15:35	16:15	47	Partly Cloudy	4	9	Thief Hatch (6); Valve; EPRV (2)	10/31/2019	OGI	0	0	0	N
911665	COMBS RANCH UNIT 33- 70 S-1H PAD			10/29/2018	9:25	10:25	58	Sunny	5	8	Thief Hatch (6) Valve (2)	10/31/2019	OGI	0	0	0	N
922365	UNDEN 19-34-69 B PAD			12/13/2018	14:05	14:45	39	Partly Cloudy	12	5	Thief Hatch (4) Fitting	12/13/2018	OGI	σ	0	0	N
928230	88 19-35-70 USA A PAD			9/5/2018	7:45	8:30	56	Overcast	9	1	Thief Hatch	9/5/2018	OGS	0	0	0	N.
920086	COMBS RANCH 16-33-70 B PAD			8/1/2018	12:20	13:40	78	Overcast	5	11	Regulator (2); Valve; Thief Hatch (8)	8/1/2018	OGI	0	0	0	N
912906	SUNDQUIST 19-34-72 A PAD			9/18/2018	9:25	10:00	60	Overcast	4	0	N/A	N/A	N/A	0	0	0	N
919308	YORK RANCH 12-33-70 A PAD			11/14/2018	8:10	9:00	42	Sunny	14	1	Regulator	11/14/2018	OGI	0	0	0	N
929540	88 25-35-71 USA A PAD			12/21/2018	9:15	10:30	46	Overcast	16	5	Regulator (2); Valve (2); Thief Hatch	12/21/2018	OGI	ō	0	0	N
928905	88 1-35-71 USA A PAD			12/19/2018	9:30	10:25	42	Partly Cloudy	13	3	Thief Hatch (3)	12/19/2018	OGI	0	0	0	N
914818	GRAHAM 23-35-71 A PAD			10/26/2018	8:10	9:00	28	Partly Cloudy	10	2	Thief Hatch, Fitting	10/26/2018	ogi	σ	0	0	N

NSPS Subpart OCOO'a Annual Report for period beginning 8/2/2018 - collection of fugitive emissions components at a well site

Operator Name

CHESAPEAKE OPERATING LLC

Monitoring I		FLIR GF320						1									
Serial Number		44402191															
Surveys Perf		Josh Fentor															
Operator Tra	ining and Experience	Trained and	Certified for Op	itical Gas Imag	ging Januar	y 2018											
Site Number	Site Name	Surface Latitude Value	Surface Longitude Yalue	GOODS Survey Date	ODDDa Survey Start Time	0000a Survey End Time	Ambient Temperature (F)	Sky Conditions	Max Observed Wind Speed (mph)	Number of Leaking Components	Type of Leaking Component	Repair Date	Repair Verification Method	Number and type of leaking components not repaired	Number and type of difficult to monitor or unsafe to monitor	Number and type of components placed on delay of repair	Deviation from monitoring plan
60.5420a(b) (1)(ii)	60.5420a(b)(1)(i)	60.5420a(b )(1)(i)	60.5420a(b)(1)	60.5420a(b)( 7) (i)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(iv)	60.5420a(b)(7 )(iv)	60.5420a(b )(7)(iv)	60.5420a(b )(7)(vii)	60.5420a(b)(7)(vii )	60.5420a(b)( 7)(x)	60.5420a (b)(7)(xiii)	60.5420a(b)( 7)(viii)	60.5420a(b)( 7)(ix)	60.5420a(b)( 7)(xi)	60.5420a(b)(7)(vi)
914573	LINDEN UNIT 19-34-69 A PAD	(b) (9)		9/7/2018	7:20	8:30	58	Sunny	6	2	Fitting; Valve	9/7/2018	OGI	0	0	D	N
902663	NW FETTER 15-33-71 A PAD			10/30/2018	11:55	12:40	51	Partly Cloudy	5	1	Valve	10/30/2018	OGI	0	0	0	N
920033	RANKIN 5-33-68 A PAD			8/31/2018	12:30	13:15	81	Partly Cloudy	8	3	Thief Hatch (2); Fitting	8/31/2018	OGI	0	0	0	N
928850	WYOMING 36-34-69 ST B PAD			8/24/2018	10:30	11:15	76	Sunny	11	4	Thief Hatch (2) Valve (2)	8/24/2018	OGI	0	0	0	N
912527	YORK RANCH 33-69-5 A PAD			8/23/2018	11:55	12:50	77	Sunny	16	3	Valve; Thief Hatch; Union	8/23/2018	OGI	0	o	o	N
922348	COMBS RANCH 17-33-70 C PAD			8/2/2018	11:20	12:20	82	Sunny	6	2	Thief Hatch; EPRV	8/2/2018	OGI	D	ø	0	N
914960	SUNDQUIST FLATS UNIT 9 34-71 A PAD			9/4/2018	10:10	11:00	62	Sunny	16	2	Thief Hatch (2)	9/4/2018	OGI	D	D	0	N
929058	BB 35-35-72 USA A PAD			9/6/2018	12:35	13:15	73	Partly Cloudy	15	2	Theif Hatch (2)	9/6/2018	OGI	0	0	0	N
928994	LEBAR 15-34-69 A PAD			9/5/2018	10:00	10:45	65	Overcast	10	2	Thief Hatch (2)	9/5/2018	OGI	0	0	0	N
929739	5FU 7-34-71 USA A PAD			12/21/2018	7:35	8;20	43	Partly Cloudy	9	4	Thief Hatch (2); Valve; Regulator	12/21/2018	OGI	0	ū	0	N
929891	NWFU 26-34-72 C PAD			9/27/2018	11:00	11:40	64	Partly Cloudy	11	4	Fitting (1) Valve (4)	9/27/2018	OGI	0	0	0	N
911597	CLAUSEN RANCH 18-34- 70 USA A PAD			9/21/2018	7:30	8:05	45	Sunny	3	2	Thief Hatch, Fitting	9/21/2018	OGI	0	D	D	N
914477	CLAUSEN RANCH UNIT 12- 34-71 A PAD			9/7/2018	8:55	9:30	64	Sunny	10	1	Thief Hatch	9/7/2018	OGI	0	0	0	N
911598	CLAUSEN RANCH UNIT 34- 70 29-1H PAD			9/12/2018	9:10	9:40	75	Sunny	7	0	N/A	N/A	N/A	D	0	0	N
919261	COMBS RANCH 7-33-70 B PAD			9/25/2018	11:25	12:00	53	Sunny	14	1	Fitting	9/25/2018	OGI	0	o	0	N

NSPS Subpart OCOOa Annual Report for period beginning 8/2/2018 - collection of fugitive emissions components at a well site

Operator Name	CHESAPEAKE OPERATING LLC
Monitoring Instrument	FLIR GF320
Serial Number	44402191
Surveys Performed By	Josh Fenton
Operator Training and Experience	Trained and Certified for Optical Gas Imaging January 2018

Operator Tra	ining and Experience	Trained and	Certified for Op	otical Gas Imag	ing Januar	y 2018											
Site Number	Site Name	Surface Latitude Value	Surface Longitude Value	ODDOs Survey Date	OOODs Survey Start Time	ODOOa Survey End Time	Ambient Temperature (F)	Sky Conditions	Max Observed Wind Speed (mph)	Number of Leaking Components	Type of Leaking Component	Repair Date	Repair Verification Method	Number and type of leaking components not repaired	Number and type of difficult to monitor or unsafe to monitor	Number and type of components placed on delay of repair	Deviation from monitoring plan?
60.5420a(b) (1)(ii)	50.5420a(b)(1)(i)	)(3)(i)	60.5420a(b)(1) (i)	60.5420a(b)( 7) (i)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(iv)	60.5420a(b)(7 )(iv)	60.5420a(b )(7)(iv)	60.5420a(b )(7)(vii)	60.5420a(b)(7)(vii	60.5420a(b)( 7)(x)	60.5420a (b){7)(xiii)	60.5420a(b)( 7)(viii)	60.5420a(b)( 7)(ix)	60.5420a(b)( 7)(xi)	60.5420a(b)(7)(vi)
902524	WYOMING 36-35-72 ST A PAD	(b) (9)		8/28/2018	12:10	12:40	59	Partly Cloudy	6	0	N/A	N/A	N/A	0	0	0	N
915282	CLAUSEN RANCH UNIT 8- 34-70 A PAD			9/24/2018	7:35	8:25	54	Sunny	4.	1	Thief Hatch	9/24/2018	OGI	0	0	0	N.
929741	SFU 12-34-72 USA B PAD			8/22/2018	13:55	15:00	79	Sunny	6	8	Thief Hatch (S) Valve (3)	8/22/2018	OGI	0	0	0	N
922358	UNDEN 21-34-69 USA B PAD			3/26/2019	10:15	10.55	50	Partly Cloudy	5	0	N/A	N/A	N/A	0	0	0	N
928995	RANKIN 31-34-68 A PAD			6/10/2019	14:35	15:35	68	Overcast	6	2	Thief Hatch (2)	6/18/2019	OGI	0	0	0	N
929651	BB 19-35-71 USA A PAD			6/23/2019	13:00	13:45	52	Partly Cloudy	7	2	Thief hatch (2)	6/24/2019	OGI	0	0	0	N
929929	COMBS 13-33-71 A PAD			3/25/2019	9:40	10:30	40	Overcast	10	1	Valve	3/25/2019	OGI	0	0	o	N
919409	CLAUSEN RANCH 8-34-70 B PAD			3/25/2019	7:20	8:15	38	Overcast.	10	0	N/A	N/A	N/A	0	0.	0	N
915283	CLAUSEN RNCH U 7-34-70 USA A P			3/21/2019	9:20	9:50	44	Sunny	10	1	Thief Hatch	3/21/2019	OG)	0	D	0	N
922349	COMBS RANCH 17-33-70 USA B PAD			4/15/2019	13:00	13:30	46	Overcast	4	0	N/A	N/A	N/A	0	0	0	N
902674	COMBS RANCH 7-33-70 USA C PAD			5/2/2019	15:35	16:05	55	Partly Cloudy	10	8	Thief Hatch (7), Fitting	5/2/2019	OGI	0	0	0	N
911665	COMBS RANCH UNIT 33- 70 8-1H PAD			5/6/2019	13:55	15:20	48	Overcast	4	1	Thief Hatch	5/6/2019	OGI	0	0	0	N
922365	LINDEN 19-34-69 B PAD			6/18/2019	12:00	12:50	66	Partly Cloudy	5	2	Thief Hatch (2)	6/18/2019	OG)	0	0	0	N
928230	BB 19-35-70 USA A PAD			6/12/2019	14:30	15:30	67	Sunny	5	5	Thief Hatch (3), Valve (2)	6/12/2019	OGI	0	0	0	N
920086	COMBS RANCH 16-33-70 B PAD			1/30/2019	8:30	9:30	18	Partly Cloudy	9	3	Fitting, Thief Hatch (2)	1/30/2019	OGI	0	0	0	N
					_												

NSPS Subpart OCOCo Annual Report for period beginning 8/2/2018 - collection of fugitive emissions components at a well site

Operator Nar	t OOOOa Annual Report fo		E OPERATING L		fugitive en	nissions co	mponents	at a well site									
Agnitoring in		FLIR GF320	E OPERATING L	i.C				-									
ierial Numbe		44402191															
urveys Perfo		Josh Fentor	1														
_	ining and Experience		Certified for Op	otical Gas Imag	ing Januar	y 2018											
Site Number	Site Name	Surface Latitude Value	Surface Longitude Value	OOOOs Survey Date	DOOOs Survey Start Time	OODDa Survey End Time	Ambient Temperature (F)	Sky Conditions	Max Observed Wind Speed (mph)	Number of Leaking Components	Type of Leaking Component	Repair Date	Repair Verification Method	Number and type of leaking components not repaired	Number and type of difficult to monitor or unsafe to monitor	Number and type of components placed on delay of repair	Deviation from monitoring pla
60.5420a(b) (1)(ii)	60.5420a(b)(1)(i)	60.5420a(b	60.5420a(b)(1)	60.5420a(b)( 7) (i)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(ii)	60.5420a (b)(7)(lv)	60.5420a(b)(7 )(iv)	60.5420a(b )(7)(iv)	60.5420a(b )(7)(vii)	60.5420a(b)(7)(vii )	60.5420a(b)( 7)(x)	60.5420a (b)(7)(xiii)	60.5420a(b)( 7)(viii)	60.5420a(b)( 7)(ix)	60.5420a(b)( 7)(xl)	60.5420a(b)(7)(vi)
912906	SUNDQUIST 19-34-72 A PAD	(b) (9)		3/18/2019	8:35	9:30	28	Sunny	1	6	Thief Hatch (5), Valve	3/18/2019	0GI	0	0	0	N
920078	WCR 2-33-69 A PAD			6/24/2019	13:15	13:50	73	Partly Cloudy	10	1	Thief Hatch	6/24/2019	OGI	0	D-	0	N
919308	YORK RANCH 12-33-70 A PAD			6/11/2019	8:45	10:45	53	Overcast	11	1	Valve	6/11/2019	ogi	0	0	0	N
929540	BB 25-35-71 USA A PAD			6/24/2019	14:30	15:30	74	Partly Cloudy	12	1	Regulator	6/24/2019	OGI	0	0	0	N
929939	RRC 4-34-70 USA D PAD			6/25/2019	14:45	15:30	78	Partly Cloudy	4	4	Thief Hatch (3), Valve	6/25/2019	OGI	0	0	0	N
928905	88 1-35-71 USA A PAD			6/20/2019	15:10	16:00	73	Partly Cloudy	8	4	Thief Hatch (4)	6/20/2019	ogi	0	0	0	N
902623	COMBS RANCH 11-33-71 USA A PAD			6/26/2019	8:15	9:00	58	Sunny	5	1	Thief Hatch	6/26/2019	ogi	0	0	0	N
902673	COMBS RANCH 21-33-70 USA A PAD			1/21/2019	7:20	8:05	46	Overcast	11	1	Thief Hatch	1/21/2019	OGI	0	0	0	N
914818	GRAHAM 23-35-71 A PAD			6/10/2019	15:10	15:50	68	Partly Cloudy	5	2	Thief Hatch (2)	6/10/2019	OGI	0	0	D	N
929680	88 29-35-71 USA B PAD			6/23/2019	13:50	14:30	60	Sunny	8	0	N/A	N/A	N/A	0	0	0	N
914819	GRAHAM 2-35-71 A PAD			6/25/2019	8:00	9:00	58	Sunny	3	2	Thief Hatch, Regulator	6/25/2019	OGI	0	0	0	N
914573	LINDEN UNIT 19-34-69 A PAD			6/13/2019	6:50	8:30	72	Sunny	4	8	Thief Hatch (4), Valve (4)	6/13/2019	OGI	0	o	0	N
909630	NORTHWEST FETTER 1-33 72 A PAD			1/7/2019	8:55	9:30	42	Sunny	18	0	N/A	N/A	N/A	0	0	0	N
902663	NW FETTER 15-33-71 A PAD			4/30/2019	15:35	16:00	33	Overcast	5	0	N/A	N/A	N/A	0	0	0	N
920033	RANKIN 5-33-68 A PAD			6/11/2019	9:35	10:10	55	Partly Cloudy	10	0	N/A	N/A	N/A	0	0	0	N

NSPS Subpart OODOs Annual Report for period beginning 8/2/2018 - collection of fugitive emissions components at a well site

Operator Name

CHESAPEAKE OPERATING LLC

Monitoring In Serial Number		FUR GF320 44402191															
Surveys Perfo		Josh Fenton															
	ining and Experience		Certified for Op	stical Gas Imag	ine Januari	v 2018											
Site Number	Stre Name	Surface Latitude Value	Surface Longitude Value	OCCOS Survey Date	OOOOa Survey Start Time	0000a Survey End Time	Ambient Temperature (F)	Sky Conditions	Max Observed Wind Speed (mph)	Number of Leaking Components	Type of Leaking Corroonent	Repair Date	Repair Verification Method	Number and type of leaking components not repaired	Number and type of difficult to monitor of unsafe to monitor	Number and type of components placed on delay of repair	Deviation from monitoring plan?
60.5420a(b) (1)(ii)	60.5420a(b)(1)(i)	60.5420a(b )(1)(i)	60.5420a(b)(1) (i)	60.5420a(b)( 7) (i)	60.5420a (b)(7)(li)	60,5420a (b)(7)(ii)	60.5420a (b)(7)(lv)	60.5420a(b)(7 )(iv)	60.5420a(b )(7)(w)	60.5420a(b )(7)(vii)	60.5420a(b)(7)(vii	60.5420a(b)( 7)(x)	60:5420a (b)(7)(xiii)	60,5420a(b)( 7)(viii)	60.5420a(b)( 7)(ix)	60.5420a(b)( 7)(xi)	60.5420a(b)(7)(vi)
928850	WYOMING 36-34-69 ST B PAD	(b) (9)		3/22/2019	9:40	10:20	37	Overcast	1	4	Thief Hatch (2), Valve (2)	3/22/2019	OGI	0	0	0	N
912527	YORK RANCH 33-69-5 A PAD			6/12/2019	7:00	8:20	52	Sunny	6	4	Valve (4)	6/12/2019	OGI	0	0	0	N
929942	CLAUSEN 16-34-70 USA C PAD			6/26/2019	12:20	13:00	75	Sunny	3	2	Thief Hatch (2)	6/26/2019	OGI	0	0	0	N
922348	COMBS RANCH 17-33-70 C PAD			1/30/2019	9:45	10:45	31	Sunny	10	5	Thief Hatch (4), Regulator	1/30/2019	OGI	0	0	0	N
922595	COMBS RANCH 28-33-70 B PAD			1/9/2019	9:30	10:45	36	Overcast	6	6	Thief Hatch (4), Flare, Combustor	1/9/2019	OGI	0	0	0	N
914960	SUNDQUIST FLATS UNIT 9 34-71 A PAD			2/27/2019	8:50	10:00	17	Sunny	4	2	Valve (2)	2/27/2019	OGI	0	0	0	N
929058	88 35-35-72 USA A PAD			3/4/2019	10:50	11:30	5	Sunny	7	σ	N/A	N/A	N/A	D	0	0	N
928994	LEBAR 15-34-69 A PAD			3/4/2019	8:00	8:50	5	Sunny	4	0	N/A	N/A	N/A	D	0	0	N
929649	BB 19-35-70 USA B PAD			6/26/2019	10:05	11:05	65	Partly Cloudy	3	3	Connection (2), Thief Hatch	6/26/2019	OGI	0	0	0	N
929739	SFU 7-34-71 USA A PAD			6/27/2019	10:55	11:30	70	Partly Cloudy	7.	1	Valve	6/27/2019	OGI	0	0	0	N
929891	NWFU 26-34-72 C PAD			6/27/2019	9:55	10:40	70	Sunny	6	1	Thief Hatch	6/27/2019	OGI	D	0	0	- N
930125	AMASA 29-35-68 A PAD			6/30/2019	8:25	9:40	64	Overcast	2	2	Fitting, Valve	6/30/2019	OGI	0	0	0	N
911597	CLAUSEN RANCH 18-34- 70 USA A PAD			3/20/2019	13:55	14:15	50	Sunny	12	1	Flare	3/20/2019	OGI	0	0	0	N
914477	CLAUSEN RANCH UNIT 12 34-71 A PAD			6/12/2019	13:30	15:00	66	Partly Cloudy	8	p	N/A	N/A	N/A	0	0	0	N
911598	CLAUSEN RANCH UNIT 34- 70 29-1H PAD			3/11/2019	10:50	11:20	38	Sunny	6	D	N/A	N/A	N/A	0	0	0	N

Operator Na	me	CHESAPEAK	E OPERATING LI	C													
Monitoring I	nstrument	FUR GF320															
Serial Number	er	44402191															
Surveys Perf	ormed By	Josh Fenton	-														
Operator Tra	aining and Experience	Trained and	Certified for Op	tical Gas Imag	ing Januar	y 2018											
Site Number	Site Name	Surface Latitude Value	Surface Longitude Value	OCCO Survey Date	ODDDa Survey Start Time	ODDDa Survey End Time	Ambient Temperature (F)	Sky Conditions	Max Observed Wind Speed (mph)	Number of Leaking Components	Type of Leaking Component	Repair Date	Repair Verification Method	Number and type of leaking components not repaired	Number and type of difficult to monitor or unsafe to monitor	Number and type of components placed on delay of repair	Deviation from monitoring plan
60.5420a(b) (1)(ii)	60.5420a(b)(1)(i)	60.5420a(b )(1)(i)	60.5420a(b)(1) (i)	60.5420a(b)( 7) (i)			60.5420a (b)(7)(lv)		60.5420a(b )(7)(iv)	60.5420a(b )(7)(vii)	60.5420a(b)(7)(vi	60.5420a(b)( 7)(x)	60.5420a (b)(7)(xiii)	60,5420a(b)( 7)(viii)	(60.5420a(b)( 7)(ix)	60.5420a(b)( 7)(xi)	60.5420a(b)(7)(vi)
919261	COMBS RANCH 7-33-70 B PAD	(b) (9		2/11/2019	13:55	14:30	29	Sunny	15	0	N/A	N/A	N/A	0	0	0	N
902524	WYOMING 36-35-72 ST A PAD	4		2/21/2019	9:35	9:55	17	Overcast	10	0	N/A	N/A	N/A	0	0	0	N.
915282	CLAUSEN RANCH UNIT 8- 34-70 A PAD			6/20/2019	10:20	10:50	60	Partly Cloudy	8.	1	Thief Hatch	6/20/2019	OGI	0	0	0	N
929698	CLAUSEN 11-34-71 USA A PAD	4		6/23/2019	10:40	11:45	50	Partly Cloudy	5	2	Fitting (2)	6/23/2019	OGI	0	0	0	N
929741	SFU 12-34-72 USA B PAD	4		3/22/2019	7:30	8:10	35	Sunny	4	3	Thief Hatch (3)	3/22/2019	OGI	0	0	0	N
929941	CLAUSEN 5-34-70 USA B PAD			6/25/2019	10:25	11:20	65	Sunny	5	2	Thief Hatch (2), Valve (3)	6/25/2019	OGI	0	0	0	N

NSPS Subpart OOOOa annual report for period beginning 8/2/2018 - Storage Vessels

Company name: Chesapeake Exploration, L.L.C.

No affected facilities removed from or returned to service during reporting period.

Facility Name	API Well IDs	Latitude (NAD83)	Longitude (NAD83)	Serial Number(s)	VOC Emission Rate (TPY/tank). Promax Calculation Methodology	(iii) Deviations Specified in §§60.5395a, 60.5411a, 60.5412a, and 60.5413a	(iv) Meets requirements specified in §60.5410a(h) (2) and (3)
	4900932488	(b) (9)		C1709035			
				C1709037			
LEBAR 15-34-69 A PAD				C1709038	377.44	No	Yes
				C1709036			
	4900934499			EC418-077			
	4900934500			EC418-073			
	4900928429			EC409-486			
		,		EC409-487			1
				C1709016			
				C1709015			
				C1709005			
YORK RANCH 33-69-5 A PAD				C1709024	289.68	No	Yes
				C1709023	205.00	140	'6
				C1709006			
				C1709010			
				C1709007			
				C1709008	]		
				C1709026			
	_			C1709018			
				C1709001			

#### NSPS SUBPART OCCOR ANNUAL REPORT- PNEUMATIC PUMP AFFECTED FACILITIES

Chesapeake Operating LLC 8/2/2018-8/1/2019

Facility Record Number	Facility Name	STATE_NAME	Identification of Each Pump (60.6530a(b)(1))	Was the pneumatic pump constructed, modified, or reconstruted during the reporting period? (60.5420a(b)(8)(i))	What condition does the pneumatic pump meet? (60.5420a(b)(8)(i))	Control device design efficiency (60.5420a(b)(8)(i)(C))	Pneumatic pump previously reported with a change in the reported condition during the reporting period?	Deviations
915283	CLAUSEN RNCH U 7-34-70 USA A P	wy	2337409	N	Emissions routed to a control device	95%	N	None
915283	CLAUSEN RNCH U 7-34-70 USA A P	WY	2146051	N	Emissions routed to a control device	95%	N	None
922365	LINDEN 19-34-69 B PAD	WY	2337401	N	Emissions routed to a control device	95%	N	None
922365	LINDEN 19-34-69 8 PAD	WY	2337405	N	Emissions routed to a control device	95%	N	None
922358	UNDEN 21-34-69 USA B PAD	WY	2337410	Y	Emissions routed to a control device	95%	N	None
929741	SFU 12-34-72 USA B PAD	WY	2335061	N	Emissions routed to a control device	95%	N	None
912906	SUNDQUIST 19-34-72 A PAD	WY	2350951	Y	Emissions routed to a control device	95%	N	None
928850	WYOMING 36-34-69 ST B PAD	WY	2337403	N.	Emissions routed to a control device	95%	N	None

### Attachments

40 CFR § 60.5420a (b)(12): Certifications signed by a qualified professional engineer for each closed vent system routing to a control device or process.



# Independent Engineering Assessment of Closed Vent System and Control Device Design and Capacity

Chesapeake Operating LLC Lebar 15-34-69 A TR 22H Oil Production Facility
October 12, 2018

### **Professional Engineer Certification**

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of Subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

Michael Shaffron, P.E.
Certifying Professional Engineer

10/12/2018 Date





# Independent Engineering Assessment of Closed Vent System and Control Device Design and Capacity

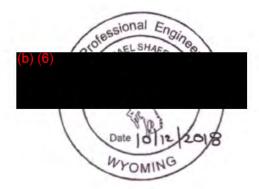
Chesapeake Operating LLC York Ranch 33-69-5 A Pad Oil Production Facility
October 12, 2018

### **Professional Engineer Certification**

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of Subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

Michael Shaffron, P.E.
Certifying Professional Engineer

10/12/2018 Date





# Independent Engineering Assessment of Closed Vent System and Control Device Design and Capacity

Chesapeake Operating LLC Wyoming 36-34-69 ST B Pad Oil Production Facility
October 12, 2018

### **Professional Engineer Certification**

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of Subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

Michael Shaffron, P.E.
Certifying Professional Engineer

10/12/2018 Date





# Independent Engineering Assessment of Closed Vent System and Control Device Design and Capacity

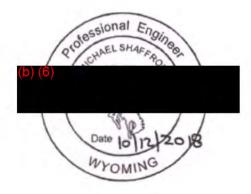
Chesapeake Operating LLC SFU 12-34-72 USA B Pad Oil Production Facility
October 12, 2018

### **Professional Engineer Certification**

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of Subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

Michael Shaffron, P.E.
Certifying Professional Engineer

10/12/2018 Date





# Independent Engineering Assessment of Closed Vent System and Control Device Design and Capacity

Chesapeake Operating LLC Linden 19-34-69 B Pad Oil Production Facility
October 12, 2018

### **Professional Engineer Certification**

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of Subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

Michael Shaffron, P.E. Certifying Professional Engineer 10/10/2018 Date





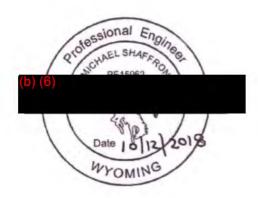
# Independent Engineering Assessment of Closed Vent System and Control Device Design and Capacity

Chesapeake Operating LLC Clausen Ranch Unit 7-34-70 USA A Pad Oil Production Facility
October 12, 2018

### **Professional Engineer Certification**

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of Subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

Michael Shaffron, P.E. Certifying Professional Engineer 10/12/2018 Date



Compliance Evaluation of Closed Vent System Designs per 40 CFR 60 Subpart OOOOa, section 60.5411a Linden 21-34-69 USA B Pad

#### (5) REPORT CONCLUSIONS AND CERTIFICATION

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of subpart OOOOa of CFR part 60. Additional air permitting and compliance activities should need to follow up with Chesapeake's HSER department.

Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

(b) (6)	eional Fo
	Protessional Engines 16745
PE Signature:	
Facility:Linden_21-34-69 USA B Pad	Date WYOMING
Date: October 15, 2019	PE Number: *WY PE 16745*

Compliance Evaluation of Closed Vent System Designs per 40 CFR 60 Subpart OOOOa, section 60.5411a Sundquist 19-34-72 A Pad

#### (5) REPORT CONCLUSIONS AND CERTIFICATION

I certify that the closed vent system design and capacity assessment was prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of subpart OOOOa of CFR part 60. Additional air permitting and compliance activities should need to follow up with Chesapeake's HSER department.

Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.

(b) (6)	Professional Enginee
PE Signature:	
Facility: Sundquist 19-34-72 A Pad	Date 10/18/19
Date: October 15, 2019	PE Number: *WY PE 16745*



9414 8149 0108 4218 8143 33

U.S. Environmental Protection Agency – Region 8
Director, Air and Toxics Technical Enforcement Program
1595 Wynkoop Street
Denver, CO 80202-1129